

proposals benefit the overall economy is unclear, but how it benefits the CAPs is perfectly clear. In *Harris'* discussion of "rent seeking behavior," he provides some very valuable insights into the problems created by this type of behavior:

[I]t typically leads to a misallocation of resources and subsequent losses in productivity and real economic growth.... [W]hen public policies constrain competition in a particular industry, they invariably lessen pressure on individual firms to upgrade their products and services.¹⁶⁹

ICA (at 5) asks the Commission to give "little weight to LEC claims that more generous regulatory rules...will create benefits outside their sector in the overall U.S. economy." ICA (at 6) states: "[J]ob gains among information-intensive businesses will be directly stimulated by lower LEC prices. Every dollar spent upon LEC access services at prices that are higher than efficient prices in a competitive market is a dollar that cannot, and will not, be spent creating new jobs in the information sector." Further, ICA (*id.*) continues: "If LEC cash flow is directed towards investments in competitive or foreign markets, replacing financing that should be raised in competitive capital markets, the result may simply be their unwarranted dominance over vital new sectors of America's high technology industries." Ad Hoc (at 6-7) joins in asserting that "no clear 'cause and effect' relationship exists between telecommunications infrastructure investment and general economic growth in a mature highly developed economy such as that of the United States."

CSE's (at 3) comments directly refute these statements:

- "[L]ower telecommunications prices free up consumer purchasing power for expenditures on other goods and services."

¹⁶⁹ See, "*Harris Reply Comments* at 19. (footnote omitted).

- "In addition, it is important to note that the new job opportunities may arise in sectors of the economy far distant from the LECs and their major customers." (*Id.*)
- "Consumers are getting more telecommunications output, with a smaller expenditure of resources. The prospect of higher profits offered by price caps encourages LECs to find these benefits for customers."(*Id.* at 4)

In summary: The impact of telecommunications on the economy is substantial. Providing the LECs with increased pricing flexibility and earnings incentives so they can compete effectively will promote a market efficient level of investment in the telecommunications sector, which, in turn, will promote development of the economy as a whole. Self-serving arguments made by LEC competitors, or potential competitors, for imposing more restrictive regulations on the LECs is "rent seeking" through the regulatory process, pure and simple, and should be rejected by the Commission.

B. In order to ensure efficient investment in the information superhighway, a new price cap plan must provide regulatory symmetry.

As GTE (at 3) stresses, it is essential that the price cap plan be structured to permit the market to guide the development of the nation's infrastructure. In order for the nation to derive the benefits that the NII is capable of providing, there must be not only investment in the NII, but the right investment, in the right technology, by the most efficient firms, to provide the services customers want most. It is impossible to determine today whether the NII will be a network of fiber, coaxial cable, copper wires, radio waves, or some combination of these. It is imperative that the Commission not predetermine the direction of future developments by establishing rules that will impede the deployment of the NII by the most efficient firms -- whichever they might be.

GTE actively supports the building of the NII but the intensification of competition and technological developments have made obsolete the existing regulatory structure. The current price cap plan imposes regulatory constraints asymmetrically on exchange carriers. No other access provider is subject to equivalent constraints. As GTE has shown *supra*, the sharing provision of the current plan makes a prospective infrastructure investment less attractive to a LEC than the same investment would be to an unregulated firm. The rate structure and new service pricing rules make it difficult for a LEC to introduce a new service made possible by such an investment,¹⁶⁰ to price the service at competitive levels, or to modify it in light of market experience.¹⁶¹ These distortions prevent LECs from competing on equal terms with other providers and inhibit them from making investments that would be part of a competitive market outcome.

Some parties have attempted to turn this asymmetry on its head by arguing that heavy asymmetric regulation of the LECs will actually give them an artificial advantage in building the NII. Having constructed this "strawman," these parties then proceed to attack it, accusing the Commission of proposing a form of "industrial policy."¹⁶² However, these parties have nothing but their own construct to attack, since neither the Commission nor the exchange carriers have proposed such a policy.

¹⁶⁰ There also is a great degree of uncertainty about the ability to obtain approval for new service offerings.

¹⁶¹ The current productivity offset also is well above the level which would correspond to observed long run trends in TFP. LECs, of course, are subject to many other constraints, apart from price cap rules, which do not affect other providers.

¹⁶² See, MCI at 12, CompTel at 13-14, WilTel at 17, Teleport at 6-7.

GTE has clearly supported the development of a regulatory framework based on the principle of symmetry. This is the only effective way to permit the market to determine how the NII should be built, and by whom. If the Commission's rules are to encourage the creation of a new, advanced network, they must not contain any unnecessary bias against particular participants, services, or technologies. As *Schankerman* (at 3) states: "[A]ll forms of asymmetric regulation contain an intrinsic bias toward some firms or technologies and therefore create the potential for large technical efficiency losses." The Commission can promote the development of the NII by designing regulation which allows appropriate price signals to direct efficient investment decisions by all participants.

The design of a price cap plan with reasonable parameters, and incentives which more closely approximate those of a competitive market, will certainly not commission the LECs as the builders of the NII. The LECs expect to compete for the opportunity to provide parts of the NII, and rightly so. But the NII will be built by many firms, and no firm will have an exclusive right to participate.¹⁸³

If all potential providers are to make rational investment decisions, then not only must the Commission set the basic parameters of the price cap plan at reasonable levels; it must also establish the ground rules under which these firms will compete. As

¹⁸³ There are many reasons why the LECs should participate in the building of the NII: the LECs' customer base is far-reaching; they have the technical expertise necessary for advanced technology deployment; and there are economies of scope between new and existing services offered by LECs. Most importantly, the LECs already have a substantial investment in the existing infrastructure and provide interconnectivity and interoperability among networks. It is important that interoperability and interconnectivity be maintained and enhanced as the NII will depend on all links in a "network of networks" being able to communicate with each other.

Darby states: "Through direct and substantial influence on investment risk and expected returns, price cap regulations can either stimulate or dampen LEC incentives to invest...."¹⁸⁴ As *Schankerman* (at 12) explains, the incentives to invest each firm has will depend upon its expectations concerning how the competitive game will be played.¹⁸⁵ Failure to establish reasonable expectations now will distort entry decisions and induce capital investments based on factors unrelated to efficiency.

GTE's proposal would establish an adaptive framework now which would allow all firms to base their decisions on reasonable expectations concerning the rules of the game. This framework also would provide the maximum degree of regulatory symmetry consistent with protection of consumers in less competitive markets.

GTE believes that *Ad Hoc* (at 7) badly mischaracterizes Commission policy when it states: "Commission pursuit of an industrial policy to direct investment in telecommunications infrastructure with the intended purpose of benefiting employment and the economy in general would be misguided, imprudent and perhaps illegal." The Commission is not – and should not be – directing the deployment of telecommunications infrastructure. As *Harris* states:

Indeed, precisely because the US does not practice classical "industrial policy" by expending large sums of public funds on targeted industries, it is all the more important that the Commission adopt policies that will attract sufficient private investment in strategic industries. Given the positive spillovers from telecommunications infrastructure, public policies

¹⁸⁴ See, *Darby* at 3. See also *Rohlfs*, Jeffrey H., and Harry M. Shooshan III, "New Investment and the Regulatory Climate," *Telephony*, May, 1994, at 56-60.

¹⁸⁵ *Schankerman* demonstrates this fact through the use of a model of a two-stage game. In the first stage, firms make entry and investment decisions. In the second, they compete on the basis of price, quality, and other factors. Each firm will condition its choices in the first stage of the game on its expectations regarding the rules for the second stage.

should promote, at a minimum, the market efficient level of investment. That can only be accomplished by adopting policies that are premised on the dynamics of change, encourage and reward innovation, and remove regulations that inhibit the deployment of new technologies and the delivery of new services.¹⁸⁶

In fact, Ad Hoc's strawman is without substance. Ad Hoc assumes that the Commission would somehow provide the LECs with supra normal profits, which would then be invested in the infrastructure. There is no suggestion of any such intent in the NPRM. As GTE has shown *supra*, LEC earnings have been, if anything, less than the average for large competitive firms. Prospectively, GTE has proposed setting the productivity offset on the basis of long run TFP, which Ad Hoc agrees is the correct measure. Finally, Ad Hoc appears to assume that LEC earnings would provide a source of funds which would allow the LECs to make uneconomic investments. In fact, every LEC investment must compete for resources in capital markets. This is true regardless of whether some LEC capital is generated internally. Financial markets will only permit a firm to retain and invest internally generated funds if the expected returns on the internal investments are at least as attractive as those for alternative investments. In order to promote "the market efficient level of investment," as *Harris* recommends, the price cap plan must allow LECs to face the same risks and rewards on a given investment project that a competitive firm would face.

Some commenters, such as CCIA recognize that the Commission's goals should include the encouragement of efficient development of the NII. But as CCIA notes (at 3) the existing price cap plan fails "to provide the strongest possible positive financial

¹⁸⁶ See, *Harris Reply Comments* at 11. (footnote omitted)

incentives for LEC investment in an advanced telecommunications infrastructure...."

Dr. Vanston points out that "LECs will have to make tremendous investments in technology, at substantial risk, to achieve the economies necessary for the mass market provision of digital communications services."¹⁶⁷ If the LECs are to make these investments, and assume the associated risks, then they must have some assurance that they will be able to reap the rewards of greater efficiency just as in the case of unregulated firms.

Several commenters also express concern that the market should determine the services to be provided over the NII.¹⁶⁸ Ad Hoc says (at 11-12):

The bottom line is that consumers, not the FCC, should define the demand for broadband and other information services and, to the extent feasible, marketplace forces should be allowed to operate so that competing service providers and alternative technologies proving most efficient in meeting that demand ultimately prevail, thereby defining the parameters of the NII in response to actual demand and marketplace forces rather than government fiat or LEC caprice.

GTE agrees. However, unlike Ad Hoc, GTE has proposed a plan which actually promotes such an outcome by allowing all services, as well as all providers, to compete on the most even terms possible. Rather than "put the LEC in the driver's seat" as MCI claims, GTE's proposal will put the consumer in the driver's seat by providing the widest array of competitive choices.

¹⁶⁷ See, USTA's Comments, Attachment 8, Lawrence K. Vanston, *Accelerating Investment in the Telecommunications Network - Impacts of Technology Adoption and Service Quality*, at 3.

¹⁶⁸ See, Pennsylvania consumer advocate at 9; Ad Hoc at 11-12.

In summary: GTE actively supports the building of the NII but the intensification of competition and technological developments have made obsolete the existing regulatory structure. In order to promote efficient investment in the NII, the Commission must immediately develop a regulatory framework that contains clear and stable ground rules for competition. GTE has proposed such a framework. Far from being "industrial policy" this proposal is the approach which will allow market forces to direct the development of the NII.

C. The sale of exchanges between LECs benefits consumers and enhances infrastructure development.

GTE agrees with ICA (at 24) which "supports the objective that the form or type of regulation to which a specific LEC is subject should not affect decisions about sales and swaps of serving areas." As NRTA (at 4) points out, the Commission should not place any additional obstacles in the way of transactions that benefit rural customers.¹⁸⁹ GTE submits that the sale of exchanges is generally done to improve efficiency by consolidating operating areas – which benefits all customers. GTE has consolidated operations in several areas thereby achieving operational efficiencies, and reductions in overhead. One of GTE's prime drivers was to increase efficiency – a major thrust of price cap regulation.

Those parties with concerns about the sale of exchanges are more interested in having the price cap LECs treat associated costs as exogenous. AT&T (at 51) believes that price cap LECs "should be required to flow through those cost savings directly to

¹⁸⁹ Amendment of Part 69, CC Docket No. 89-2, Report and Order, 5 FCC Rcd 231, 233, 246-248 (1989). Commission rules should not "impede transactions that offer legitimate advantages to the LECs and consumers involved." *Id.* at 233.

its customers through an exogenous change to its PCI." MCI (at 47) also wants "exogenous treatment of the costs associated with divested properties...." The Commission should not turn exogenous treatment into an impediment to transactions that benefit ratepayers.

MCI (at 61) believes the offset should equal additional subsidies from triple DEM weighting and increased USF payments. Ad Hoc (at 32), although not recommending any modifications at this time, suggests that the Commission expeditiously initiate a comprehensive review of Access Charge and Separations Rules including high cost exchange support mechanism to determine if price cap rules need to be changed.¹⁷⁰ GTE submits that a price cap review is not an appropriate proceeding to deal with questions of selling or trading telephone property and any possible impact on universal service. These matters should be dealt with in a proceeding that specifically addresses universal service concerns.

In summary: On the sale of exchanges between price cap LECs and non-price cap LECs, GTE suggests there is no immediate need for a change in current Commission practice which examines transactions on a case-by-case basis. Broader policy questions can be addressed in a proceeding concerned with universal service.

D. Universal Service is an important issue that should be addressed immediately in a proceeding dedicated to correcting the asymmetric treatment of universal service obligations.

The Commission's universal service goal is being met as GTE (at 82-83) illustrates in its comments.¹⁷¹ The issue the Commission must now address is how to

¹⁷¹ Other parties also agree that universal service goals are being met. See, MCI (at 76); Wiltel (at 17); ICA (at 8); OPASTCO (at 5).

maintain this goal in an increasingly competitive marketplace. As *Schankerman* (20-21) states: "Universal service obligations are funded primarily through implicit subsidies in the price structure. These obligations are an important source of asymmetric regulation.... In the long run, competition that targets high-value local exchange services will make these indirect subsidies unsustainable...."

The current structure of universal service funding also distorts entry decisions and could lead to misdirected investment. It is important that the Commission establish a universal service funding mechanism that does not distort entry signals in favor of any firm or technology. This requires a supply-side neutral approach where funding obligations are uniformly imposed on all service providers.¹⁷² The best method of accomplishing this is to immediately open a proceeding to address the asymmetric treatment of universal service obligations. *USTA's Petition* proposed the establishment of such a proceeding.¹⁷³ A broad proceeding on universal service issues will also provide an appropriate forum for evaluating the effects of universal service policies on specific demographic groups, a concern raised in the NPRM.

The Commission should also act in this proceeding to establish a price cap plan that recognizes competition and encourages efficient investment in the infrastructure which will, in turn, serve to promote universal service. Providing the LECs the ability to effectively compete will allow them to retain revenues necessary to support their

¹⁷² See, *Schankerman* at 21.

¹⁷³ GTE agrees with those commenters that believe the issue of universal service should be addressed outside this proceeding. See, *MCI* (at 14); *Sprint* (at 7); *Wiltel* (at 18); *ICA* (at 8); *OCCO* (at 6).

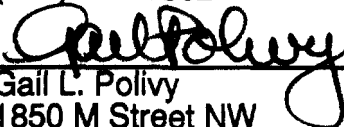
universal service obligations. Encouraging efficient investment in the infrastructure will make advanced services available sooner and to a broader base of consumers.

In summary: There is general agreement that the goals of universal service have not been impacted by the current price cap plan. The Commission can further promote its goal of universal service by establishing a new price cap plan that addresses competition and encourages efficient infrastructure development. GTE recommends that the Commission expeditiously open a proceeding to design a universal service funding mechanism that is consistent with the principles of regulatory symmetry.

Respectfully submitted,

GTE Service Corporation and
its affiliated domestic
telephone operating companies

Richard McKenna HQE03J36
GTE Service Corporation
P.O. Box 152092
Irving TX 75015-2092
(214) 718-6362



Gail L. Polivy
1850 M Street NW
Suite 1200
Washington DC 20036
(202) 463-5214

June 29, 1994

Their Attorneys

ATTACHMENT 1

WEIGHTED AVERAGE COST OF CAPITAL FOR LOCAL EXCHANGE CARRIERS

The Local Exchange Carriers ("LECs") are involved in an industry that is highly capital intensive. Consequently, the LECs must be in a position to aggressively compete for investment capital. As such, the LECs must have strong balance sheets and earnings in order to provide competitive returns to their investors. This study provides a fair methodology to determine the current Weighted Average Cost of Capital ("WACC") for the LECs. The WACC is computed by weighting the cost of capital for a company's various capital sources by their respective percentages in the company's capital structure. The cost of debt and preferred stock is contractually stipulated and is thus readily available. The cost of common equity changes over time and is not easily determined. However, several theoretical models have been developed by financial analysts to assist in estimating the cost of common equity. The remainder of this study develops the WACC for the LECs by: 1) computing their composite capital structure; 2) calculating their embedded cost of debt and preferred stock; and 3) estimating their cost of common equity.

CAPITAL STRUCTURE

The capital structure of a company represents the capital received from its investors. This capital can be in the form of debt, preferred stock, and common equity. The year end 1993 composite capital structure for the GTE and the Regional Bell Telephone Operating Companies ("GTOCs" and RBOCs") was utilized in determining the estimated WACC for the LECs. The debt component of the capital structure is a combination of short and long-term debt. Short-term debt was comprised of notes payable less temporary investments and notes receivable. If the net of these was less than zero, zero was utilized in that company's capital structure. Unamortized debt issuance costs were deducted from the long-term debt balance. All data was obtained from the financial statements for the GTOCs and ARMIS reports for the RBOCs. The derivation of the composite capital structure (which is comprised of 41.518 percent debt, 0.193 percent preferred stock, and 58.289 percent common equity) is shown in Attachment 1A.

EMBEDDED COST OF DEBT

The embedded cost of debt for the GTOCs and RBOCs was computed by dividing 1993 interest expense by the average of year end 1992 and year end 1993 debt balances. The information to make this calculation came from the financial statements for the GTOCs and ARMIS reports for the RBOCs. The embedded cost of debt for the both is 7.959 percent as computed in Attachment 1A.

EMBEDDED COST OF PREFERRED STOCK

The embedded cost of preferred stock for the GTOCs and RBOCs was calculated using the "yield-to-maturity" ("YTM") methodology. The YTM requires the computation of the embedded cost rate only once during the life of the security. The YTM equates the present value of all future principal and interest payments with the net proceeds of the financing, thus properly considering the time value of money associated with discounts, premiums, and issuance expense. This calculation was based on internal financial records (the RBOCs had no preferred stock). The embedded cost of preferred stock for the GTOCs and RBOCs is 6.293 percent as computed in Attachment 1A.

COST OF COMMON EQUITY

Because the common stock of LECs is not traded in the public securities market, it is necessary to estimate their cost of equity using data from a group of companies that are comparable in risk and whose common stock is issued to the public. The use of a comparable industry group is consistent with the Hope and Bluefield cases. The basic premise in determining a fair return is that the allowed Return On Equity ("ROE") should be commensurate with ROEs for other firms with comparable risk. In this study, firms with bond ratings and betas that were similar to the LECs were chosen as comparable companies. The selection was based on financial criteria included in Standard & Poor's ("S&P") Compustat database, which contains financial information on approximately 6,000 firms. The mechanics of the screens used to develop the comparable companies group are:

1. Screen for comparability of data: Foreign firms, financial firms, utilities and telephone companies were removed from the sample. Financial and foreign firms are removed because their financial characteristics and accounting procedures are widely dissimilar from those of non-financial and domestic firms. Utilities and telephone companies are removed to avoid circularity inherent in estimating the cost of equity by examining companies whose rate of return is established utilizing similar estimation procedures.
2. Screen for availability of data: Discounted Cash Flow ("DCF") analysis requires a company's stock price, expected cash dividend, and expected dividend growth rate. Accordingly, firms were screened to ensure that they had a current 50 day history of stock prices, paid regular quarterly cash dividends, and had an Institutional Brokers Estimate System ("IBES") median growth rate estimate available. Capital Asset Pricing Model ("CAPM") analysis requires a company to have a published beta. Thus, the companies were screened to ensure they had a beta published by Value Line.
3. Screen for comparable bond ratings: Companies that did not have an S&P bond rating of A- to AA were eliminated from the sample.
4. Screen to ensure beta comparability: The remaining firms were ranked according to beta value. Firms were eliminated from the sample until its market weighted beta approximated that of the LEC holding companies, which was .86.

The resulting comparable company group was utilized to estimate the cost of common equity for the LECs in a quarterly DCF and CAPM analysis. The theory and results of these models, along with a risk premium analysis, are discussed below.

Discounted Cash Flow Model: The DCF is based on the premise that the value of an asset can be determined by its ability to generate future cash flows. This method is the most widely accepted estimation method used by regulators in determining the cost of equity. In its simplest application, DCF theory makes the following standard set of assumptions:

1. Investors have long-term horizons so that the relevant cash flows are a stream of annual dividends growing at an expected rate from the most recent dividend followed by a sale of stock well in the future.
2. The horizon is so far in the future that the selling price has no influence on the current price.
3. Investors require the same rate of return for each year. Local exchange companies pay regular quarterly dividends. The present value of all cash flows associated with a security, including dividends, are important to investors. Consequently, all else being equal, an investor would buy the stock of a Company that pays quarterly dividends over one that paid annual dividends.

Thus, a quarterly version of the DCF model is appropriate to measure the cost of equity for the LECs. The formula for the quarterly DCF model is as follows:

$$k = [D_1(1+k)^{-.75} + D_2(1+k)^{-.50} + D_3(1+k)^{-.25} + D_4] / [P_0 * (1-F)] + g$$

Where: k = Cost of equity

D_{1-4} = Expected dividend

P_0 = Current or average of recent stock prices

g = Expected dividend growth rate

F = Flotation Cost Percentage

The quarterly DCF model requires estimates of the expected dividend, dividend growth rate, current or average stock price, and flotation cost percentages for each study company. The Dividend growth rate can be obtained from several sources including Value Line and the IBES. The median long-term growth rate from IBES is used here as the expected dividend growth rate. A 50 day average price and current dividend was pulled from the Compustat data base. Flotation costs for all study companies are assumed to be 5 percent of the average price based on historical

studies.¹ The DCF model resulted in a cost of equity estimate of 14.12 percent as shown in Attachment 1B.

Risk Premium Model: The risk premium model is based on the premise that investors require higher returns on common equity than on debt investments. The risk premium model is derived by adding a risk premium to a risk free rate of return. The risk free rate represents the return required for investments in securities with no risk. The risk premium represents the incremental increased return that an investor requires to invest in a riskier security. The risk free rate used here is the yield on 30 year government bonds as listed in the Wall Street Journal on June 6, 1994. The risk premium used in this analysis is the difference between the arithmetic mean of the S&P 500 total return and the arithmetic mean of U.S. long-term government Treasury yields for the period January 1926 to March 1994. The risk premium model resulted in a cost of equity estimate of 14.40% as shown in Attachment 1C.

Capital Asset Pricing Model: "The riskiness of a portfolio of assets as measured by its standard deviation of rates of return is generally less than the average of the risk of the individual assets as measured by their standard deviations. This phenomenon, in turn, has direct implications for the required rate of return on a given security: Since investors generally hold portfolios of securities, not just one security, it is reasonable to consider the riskiness of a security in terms of its contribution to the riskiness of a portfolio rather than in terms of its riskiness if held in isolation. The Capital Asset Pricing Model ("CAPM") was developed to analyze the riskiness and the required rates of return on assets when they are held in portfolios. As in all financial theories, a number of assumptions were made in the development of the CAPM...:

1. All investors are single-period expected utility of terminal wealth maximizers who choose among alternative portfolios on the basis of means and standard deviations of portfolio rates of return.
2. All investors can borrow or lend an unlimited amount at a given risk free rate of interest, and there are no restrictions on short sales of any assets.
3. All investors have identical subjective estimates of the means, variance, and covariance of returns among all assets; that is, investors have homogeneous expectations.
4. All assets are perfectly divisible and perfectly liquid, and there are no transaction costs.
5. There are no taxes.
6. All investors are price takers (all investors assume that their own buying and selling activity will not affect prices).
7. The quantities of all assets are given and fixed."²

¹ Eugene F. Brigham, Dana Aberwald, and Louis C. Gapenski, "Common Equity Flotation Costs and Rate Making", Public Utilities Fortnightly, May 2, 1985, page 30.

The CAPM quantifies the additional rate of return required for investing in securities with high risk. The CAPM formula is:

$$k = R_f + B [R_m - R_f]$$

Where k = The cost of equity

R_f = Risk free rate of return

R_m = Market rate of return

B = Beta (Company specific risk measurement indicator)

The CAPM model requires estimates of the risk free rate of return, market rate of return, and the Beta for each study company. The long-term treasury bond yield of 7.21 percent as of June 6, 1994, is used as a surrogate for the risk free rate. The market rate of return is defined as the rate of return required by investors in security portfolios comprising all assets in the market (market portfolio). The market return of 14.40 percent is derived by adding a 7.19 percent risk premium, obtained from the June 1994 Ibbotson database, to the risk free rate. The Beta represents the riskiness of investing in an asset relative to the market portfolio. The Betas in this study were obtained from the Value Line database as of June 6, 1994. The CAPM model resulted in a cost of equity estimate of 13.62 percent as shown in Attachment 1D.

SUMMARY

The cost of common equity for the LECs is in the range of 13.62 to 14.40 percent.

WEIGHTED AVERAGE COST OF CAPITAL

The estimated WACC for the LECs was calculated by weighting the results of the cost of equity models and embedded cost of debt and preferred stock by their percentage of the total capital structure. The resulting WACC is in the range of 11.259 to 11.714 percent as shown on Attachment 1E.

² Eugene F. Brigham, Financial Management Theory and Practice, 4th edition, 1985, page 233.

**AVERAGE CAPITAL STRUCTURE AND COST RATES
GTE AND BELL TELEPHONE OPERATING**

1993

(Thousands of Dollars)

Company	Interest Expense 1993	Debt				Preferred Stock		Common Equity 1993	Percent of Total Capital			
		1993	1992	Average	Cost Rate	1993	Cost Rate		Debt	Preferred	Common	Total
GTOCs												
GTE Alaska	517	4,500	4,500	4,500	11.489%	0	0.000%	6,089	42.497%	0.000%	57.503%	100.000%
GTE California	121,116	1,468,024	1,669,281	1,568,653	7.721%	81,866	5.890%	2,457,212	39.147%	2.043%	58.810%	100.000%
GTE Florida	69,530	907,916	890,612	899,264	7.732%	60,096	7.159%	1,224,271	41.020%	2.741%	56.239%	100.000%
GTE Hawaii	31,660	491,206	454,880	473,043	6.693%	0	0.000%	555,842	45.179%	0.000%	54.821%	100.000%
GTE Midwest	26,769	387,747	181,306	284,527	9.408%	0	9.069%	431,625	34.725%	0.000%	65.275%	100.000%
GTE North	123,907	1,618,644	1,679,891	1,649,268	7.513%	48,574	5.705%	2,363,815	40.914%	1.205%	57.881%	100.000%
GTE Northwest	58,185	651,954	684,370	668,162	8.708%	4,000	8.276%	972,040	41.042%	0.246%	58.712%	100.000%
GTE South	69,519	371,416	778,659	575,038	12.089%	3,637	4.891%	777,612	49.888%	0.316%	49.796%	100.000%
GTE Southwest	73,874	752,978	718,908	735,943	10.038%	19,870	6.683%	1,131,127	38.653%	1.044%	60.303%	100.000%
GTE Arkansas	3,966	38,465	35,474	36,970	10.728%	0	9.750%	50,741	41.443%	0.000%	58.557%	100.000%
Contel of California	12,097	164,221	150,506	157,364	7.687%	1,710	5.662%	216,051	41.197%	0.448%	58.355%	100.000%
Contel of Kentucky	2,543	45,055	40,230	42,643	5.963%	0	0.000%	53,973	43.062%	0.000%	56.938%	100.000%
Contel of Maine	1,598	24,147	25,205	24,676	6.476%	0	0.000%	29,147	46.302%	0.000%	53.698%	100.000%
Contel of MN	2,560	44,218	27,647	35,933	7.124%	0	9.750%	49,700	38.260%	0.000%	61.740%	100.000%
Contel of NH	404	4,531	5,581	5,056	7.991%	0	0.000%	6,033	47.861%	0.000%	52.139%	100.000%
Contel of New York	13,497	170,899	183,974	177,437	7.607%	0	0.000%	149,807	55.327%	0.000%	44.673%	100.000%
Contel of NC	4,292	45,179	40,654	42,917	10.001%	0	0.000%	57,703	41.715%	0.000%	58.285%	100.000%
Contel of the South	5,792	81,368	67,524	74,446	7.780%	0	0.000%	97,404	41.643%	0.000%	58.357%	100.000%
Contel of SC	546	7,521	6,978	7,250	7.531%	0	0.000%	9,143	43.507%	0.000%	56.493%	100.000%
Contel of Texas	8,024	109,311	89,056	99,184	8.090%	0	0.000%	141,949	39.475%	0.000%	60.525%	100.000%
Contel of Vermont	1,359	12,663	17,796	15,230	8.923%	0	0.000%	22,755	43.001%	0.000%	56.999%	100.000%
Contel of Virginia	15,920	217,326	216,242	216,784	7.344%	0	0.000%	269,463	44.533%	0.000%	55.467%	100.000%
Contel of the West	3,145	8,002	71,383	39,693	7.923%	0	0.000%	68,662	51.775%	0.000%	48.225%	100.000%
Total GTOCs	650,820	7,627,291	8,040,657	7,833,981	8.308%	219,753	6.293%	11,142,164	41.255%	1.157%	57.588%	100.000%
Total RBOCs	3,121,595	39,665,454	39,350,853	39,508,156	7.901%	0	0.000%	55,373,960	41.570%	0.000%	58.430%	100.000%
Total	3,772,415	47,292,745	47,391,510	47,342,137	7.968%	219,753	6.293%	66,516,124	41.518%	0.193%	58.289%	100.000%

Attachment 1A

**AVERAGE CAPITAL STRUCTURE AND COST RATES
GTE AND BELL TELEPHONE OPERATING
1993**

(Thousands of Dollars)

Company	Interest Expense 1993	Debt				Preferred Stock		Common Equity 1993	Percent of Total Capital			
		1993	1992	Average	Cost Rate	1993	Cost Rate		Debt	Preferred	Common	Total
RBOCs												
Ameritech Companies												
Illinois Bell	119,959	1,671,475	1,607,279	1,639,377	7.317%	0	0.000%	1,837,962	46.713%	0.000%	53.287%	100.000%
Indiana Bell	29,021	381,237	392,917	387,077	7.497%	0	0.000%	815,784	32.337%	0.000%	67.663%	100.000%
Michigan Bell	104,445	1,518,236	1,506,502	1,512,369	6.906%	0	0.000%	1,761,736	46.109%	0.000%	53.891%	100.000%
Ohio Bell	62,209	883,865	913,187	898,526	6.923%	0	0.000%	1,246,924	42.169%	0.000%	57.831%	100.000%
Wisconsin Bell	36,490	545,237	540,709	542,973	6.720%	0	0.000%	679,556	44.332%	0.000%	55.668%	100.000%
Total Ameritech	352,124	5,000,050	4,960,594	4,980,322	7.070%	0	0.000%	6,341,962	43.910%	0.000%	56.090%	100.000%
Bell Atlantic Companies												
Bell of Pennsylvania	131,895	1,737,850	1,781,230	1,759,540	7.496%	0	0.000%	2,476,951	41.747%	0.000%	58.253%	100.000%
C&P of D.C.	19,391	243,544	241,028	242,286	8.003%	0	0.000%	354,226	40.532%	0.000%	59.468%	100.000%
C&P of Maryland	78,619	1,024,367	1,118,359	1,071,363	7.338%	0	0.000%	1,468,259	42.981%	0.000%	57.019%	100.000%
C&P of Virginia	72,709	952,110	969,047	960,579	7.569%	0	0.000%	1,510,019	39.014%	0.000%	60.986%	100.000%
C&P of West Virginia	20,405	283,346	286,190	284,768	7.165%	0	0.000%	442,890	39.211%	0.000%	60.789%	100.000%
Diamond State	8,703	102,818	98,816	100,817	8.632%	0	0.000%	201,253	33.156%	0.000%	66.844%	100.000%
New Jersey Bell	112,395	1,395,433	1,390,311	1,392,872	8.069%	0	0.000%	2,549,508	35.308%	0.000%	64.692%	100.000%
Total Bell Atlantic	444,117	5,739,468	5,884,981	5,812,225	7.641%	0	0.000%	9,003,106	39.425%	0.000%	60.575%	100.000%
BellSouth	587,686	7,394,904	6,999,641	7,197,273	8.165%	0	0.000%	10,743,264	39.680%	0.000%	60.320%	100.000%
NYNEX Companies												
New England Tel	171,446	2,323,336	2,334,520	2,328,928	7.362%	0	0.000%	2,918,483	44.430%	0.000%	55.570%	100.000%
New York Telephone	347,589	3,374,109	3,770,960	3,572,535	9.729%	0	0.000%	5,185,316	41.738%	0.000%	58.262%	100.000%
Total NYNEX	519,035	5,697,445	6,105,480	5,901,463	8.795%	0	0.000%	8,103,799	42.760%	0.000%	57.240%	100.000%
Pacific Telesis Companies												
Pacific Bell	431,727	5,532,619	5,313,167	5,422,893	7.961%	0	0.000%	6,238,584	46.069%	0.000%	53.931%	100.000%
Nevada Bell	7,110	84,086	90,186	87,136	8.160%	0	0.000%	116,446	43.452%	0.000%	56.548%	100.000%
Total Pacific Telesis	438,837	5,616,705	5,403,353	5,510,029	7.964%	0	0.000%	6,355,030	46.025%	0.000%	53.975%	100.000%
Southwestern Bell	385,445	5,043,073	4,991,074	5,017,074	7.683%	0	0.000%	7,151,075	41.143%	0.000%	58.857%	100.000%
US West	394,351	5,173,809	5,005,730	5,089,770	7.748%	0	0.000%	7,675,724	39.611%	0.000%	60.389%	100.000%
Total RBOCs	3,121,595	39,665,454	39,350,853	39,508,156	7.901%	0	0.000%	55,373,960	41.570%	0.000%	58.430%	100.000%

Attachment 1A

**QUARTERLY DISCOUNTED CASH FLOW MODEL
COMPARABLE FIRM**

Ticker (A)	Company Name (B)	Current 50-Day Average Stock Price (C)	Current Quarterly Dividend (D)	Median IBES Annual Growth Forecasts (E)	(1) Next Expected Quarterly Dividend (F)	(2) Cost of Equity (G)
RTN	RAYTHEON CO	\$63.61	\$0.35	8.00%	\$0.357	10.45%
RCM	ARCO CHEMICAL CO	\$45.83	\$0.63	9.00%	\$0.639	15.20%
CRS	CARPENTER TECH.	\$59.43	\$0.60	8.00%	\$0.612	12.53%
UVV	UNIVERSAL CORP-VA	\$18.37	\$0.24	12.00%	\$0.247	18.03%
LK	LOCKHEED CORP	\$62.41	\$0.57	7.50%	\$0.580	11.58%
GLT	GLATFELTER (P.H.) CO	\$15.96	\$0.18	15.50%	\$0.181	20.63%
DF	DEAN FOODS CO	\$27.99	\$0.16	11.00%	\$0.164	13.59%
HPC	HERCULES INC	\$106.45	\$0.56	10.00%	\$0.574	12.37%
LEG	LEGGETT & PLATT INC	\$40.73	\$0.15	14.00%	\$0.155	15.69%
DEX	DEXTER CORP	\$24.10	\$0.22	10.00%	\$0.225	14.13%
RAD	RITE AID CORP	\$19.24	\$0.15	11.00%	\$0.154	14.55%
BRNO	BRUNOS INC	\$7.59	\$0.06	9.50%	\$0.061	13.05%
OAT	QUAKER OATS CO	\$64.45	\$0.53	10.00%	\$0.543	13.72%
CBS	CBS INC	\$290.57	\$0.50	13.00%	\$0.516	13.79%
ETN	EATON CORP	\$55.14	\$0.30	10.00%	\$0.307	12.45%
AVERAGE						14.12%

Source: Infovest Database June 7, 1994

1. $D * (1+E)^{.25}$
2. Including flotation cost adjustment amounting to 5% of the company's average stock price.

**RISK PREMIUM
COMPARABLE FIRMS**

RISK FREE RATE OF RETURN(1)	RISK PREMIUM(2)	COST OF EQUITY(3)
7.21%	7.19%	14.40%

1. Wall Street Journal, June 6, 1994 - yield on 30 year government bonds.
2. Ibbotson SBBI database June 7, 1994 - Arithmetic mean of the S&P 500 total return less arithmetic mean of U.S. long-term government Treasury yields for the period January 1926 - March 1994.
3. Risk free rate plus risk premium.

Attachment 1C

**CAPITAL ASSET PRICING MODEL
COMPARABLE FIRMS**

TICKER	COMPANY NAME	BETA(1)	RISK FREE RATE OF RETURN(2)	MARKET RATE OF RETURN(3)	COST OF EQUITY
RTN	RAYTHEON CO	0.75	7.21%	14.40%	12.60%
RCM	ARCO CHEMICAL CO	0.80	7.21%	14.40%	12.96%
CRS	CARPENTER TECHNOLOGY	0.80	7.21%	14.40%	12.96%
UVV	UNIVERSAL CORP-VA	0.80	7.21%	14.40%	12.96%
LK	LOCKHEED CORP	0.85	7.21%	14.40%	13.32%
GLT	GLATFELTER (P.H.) CO	0.85	7.21%	14.40%	13.32%
DF	DEAN FOODS CO	0.85	7.21%	14.40%	13.32%
HPC	HERCULES INC	0.90	7.21%	14.40%	13.68%
LEG	LEGGETT & PLATT INC	0.90	7.21%	14.40%	13.68%
DEX	DEXTER CORP	0.90	7.21%	14.40%	13.68%
RAD	RITE AID CORP	0.90	7.21%	14.40%	13.68%
BRNO	BRUNOS INC	0.90	7.21%	14.40%	13.68%
OAT	QUAKER OATS CO	0.90	7.21%	14.40%	13.68%
CBS	CBS INC	0.95	7.21%	14.40%	14.04%
ETN	EATON CORP	0.95	7.21%	14.40%	14.04%
AVERAGE		0.87			13.44%
Flotation Cost: (4)					0.18%
Average Adjusted for Flotation Cost					13.62%

1. Source: Infovest database June 7, 1994
2. Source: Wall Street Journal - yield on 30 year government bonds June 6, 1994.
3. Source: Risk free rate plus risk premium from the Ibbotson S&P database June 7, 1994.
4. Differential between the cost of equity obtained from the DCF model including flotation costs and the cost of equity obtained from the DCF model excluding flotation costs.

**WEIGHTED AVERAGE COST OF CAPITAL
GTE AND BELL TELEPHONE OPERATING COMPANIES**

<u>Capital Item</u>	<u>Percent</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Total Debt	41.518%	7.968%	3.308%
Preferred Stock	0.193%	6.293%	0.012%
Total Common Equity	<u>58.289%</u>	13.620%-14.400%	<u>7.939%-8.394%</u>
Total Capital	100.00%		11.259%-11.714%

Source: Attachments 1A through 1D.

Attachment 1E

Certificate of Service

I, Ann D. Berkowitz, hereby certify that copies of the foregoing "GTE's Reply Comments" have been mailed by first class United States mail, postage prepaid, on the 29th day of June, 1994 to all parties of record.



Ann D. Berkowitz